Arizona State Retirement System Board



US Equity Small Cap Asset Class

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February 17, 2006

Presentation Topics

- Small Cap Manager Reviews (aggregate)
 - Asset Class Snapshot
 - Mandates Overview
 - Excess Returns
 - Value Added in Dollars
 - ASRS Small Cap Equity Asset Class vs. Russell 2000
 - Style Analysis
- Small Cap Manager Reviews (individual)
 - Performance Analysis
 - Attribution Analysis
 - Style Analysis
 - Organizational Issues
 - Assessment

ASRS US Equity Small Cap Asset Class December 31, 2005

• Market Value: \$1.5b

• Passive Percent: 34%

− Target 30% ±20%

Active Style Composition:

- Core: 25%

Growth: 27%

- Value: 48%

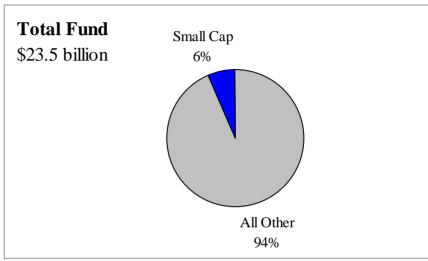
• Portfolios:

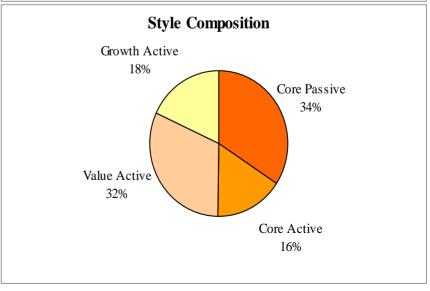
- 1 Passive
- 4 Active:

• Quantitative: 3

• Fundamental: 1

Average Fee: 13 bp





ASRS US Equity Small Cap Managers Mandates

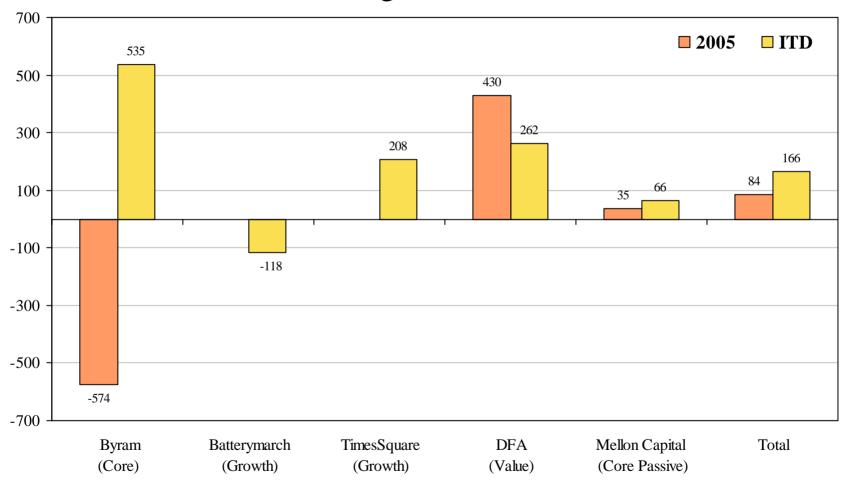
December 31, 2005

Manager	Style	Benchmark	Inception	Fee (bp)	Expected Alpha (bp)	Portfolio Assets (\$mil)	Strategy Assets (\$mil)
Active							
Byram	Core	R2000	8/31/98	30	300	\$ 238	\$ 919
DFA	Value	R2000 Val	8/31/98	21	200	\$ 465	\$ 29,346
Batterymarch	Growth	R2000 Gr	12/31/04	71	230	\$ 129	\$ 1,208
TimesSquare	Growth	R2500 Gr	3/31/05	85	215	\$ 138	\$ 1,813
Passive							
Mellon Capital	Core	R2000	8/31/98	2	0	\$ 501	\$ 1,059

ASRS US Equity Small Cap Managers

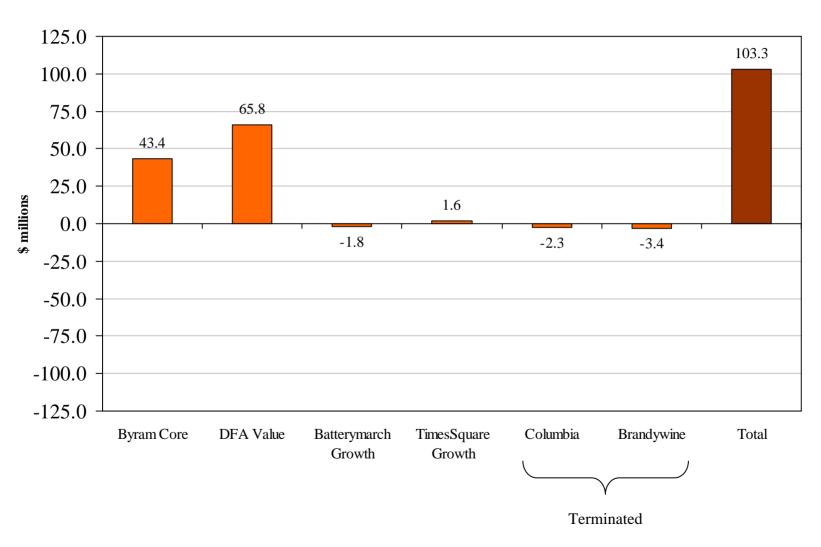
Excess Returns

Period Ending December 31, 2005



ASRS US Equity Small Cap Active Managers Value Added in Dollars

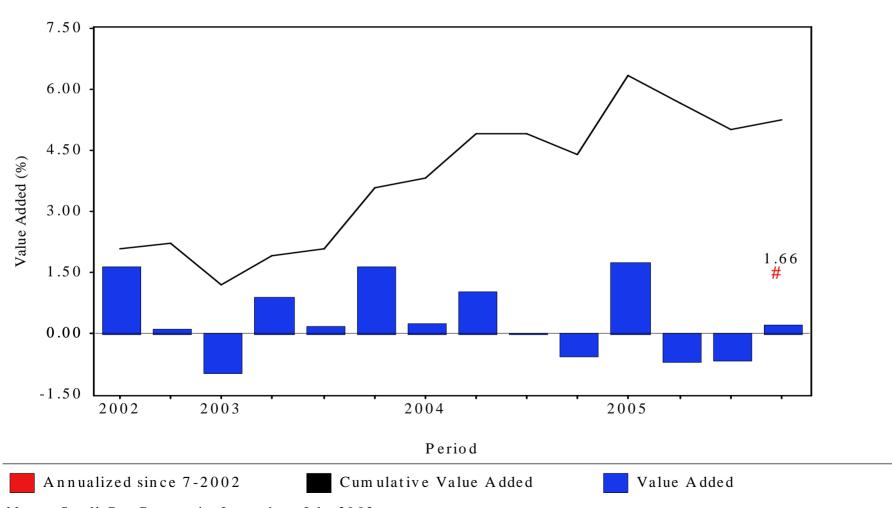
10 Year Period Ending December 31, 2005



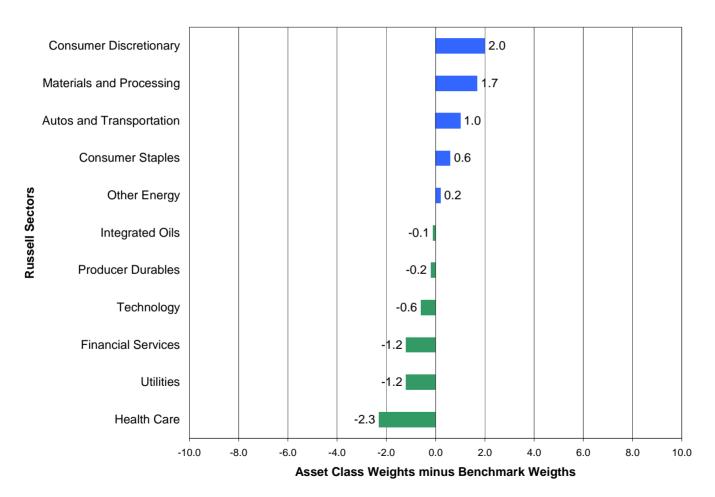
ASRS US Equity Small Cap Asset Class

Value Added Relative to Russell 2000

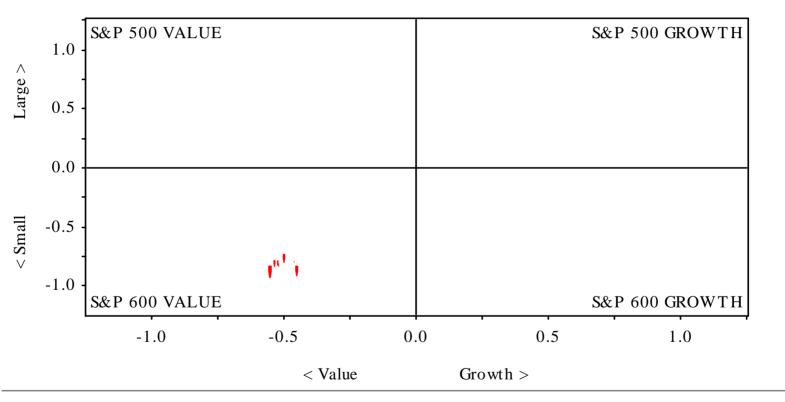
July 2002 to December 2005



ASRS US Equity Small Cap Asset Class Style Analysis: Economic Sectors As of December 31, 2005



ASRS US Equity Small Cap Asset Class Style Analysis July 2002 to December 2005



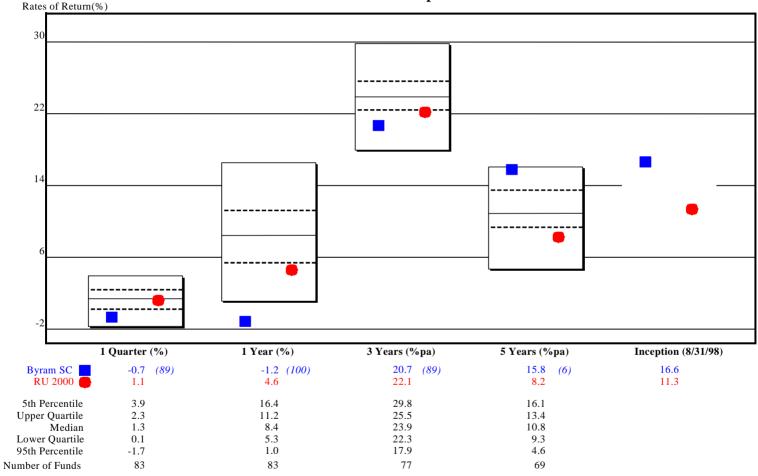
' Small Cap Composite

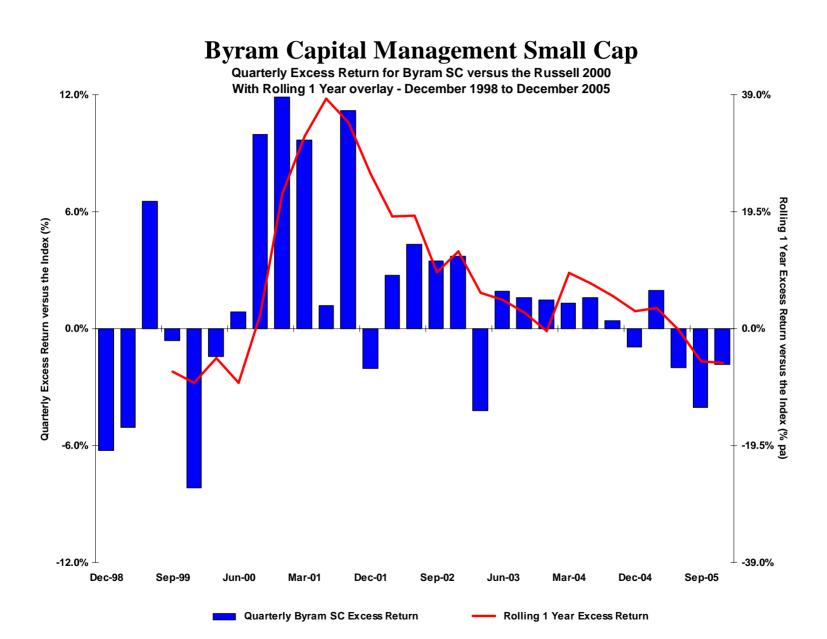
Rolling Window: 3 Years

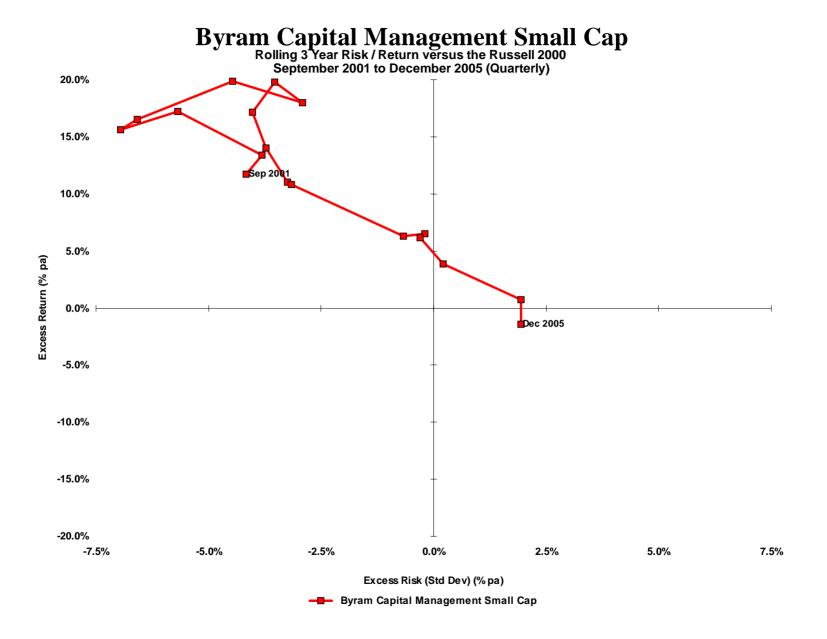
Mercer Small Cap Composite Inception: July 2002

Byram Capital Management Small Cap Comparison with the Mercer US Equity Small Cap Core Universe

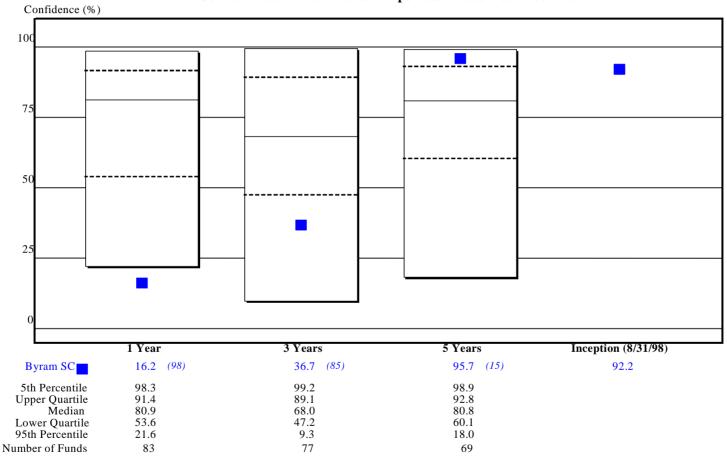
Performance before fees for periods ended December 2005







Byram Capital Management Small Cap Comparison with the Mercer US Equity Small Cap Core Universe Confidence of Value Added for periods ended December 2005



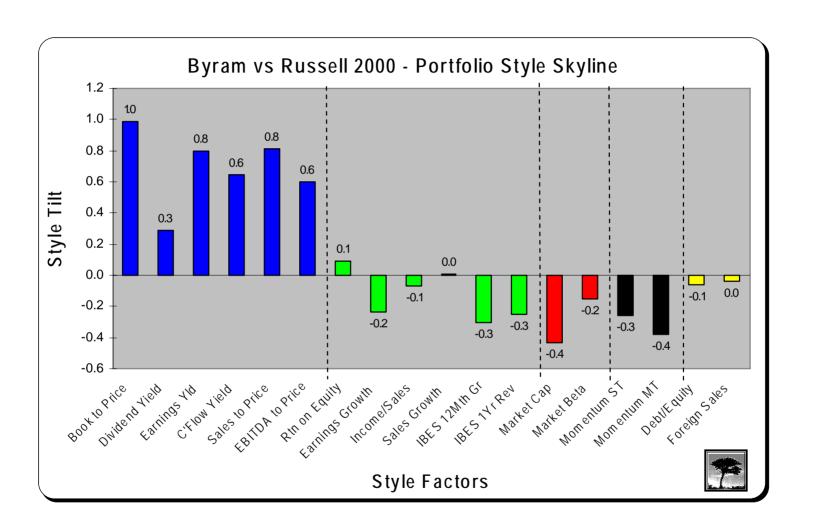
Byram Capital Management Attribution Analysis

Period Ending December 31, 2005

	Quarter	1 Year	3 Years	5 Years	Inception
Stock Selection	-1.8%	-5.0%	-0.7%	11.1%	6.5%
Sector Selection	0.1%	0.0%	0.1%	0.1%	0.0%
Other	0.0%	-0.2%	-0.5%	-3.3%	-1.0%
Fees	-0.1%	-0.5%	-0.3%	-0.3%	-0.2%
Excess Return	-1.8%	-5.7%	-1.4%	7.6%	5.3%

Byram Capital Management Style Analysis: Economic Sectors As of December 31, 2005





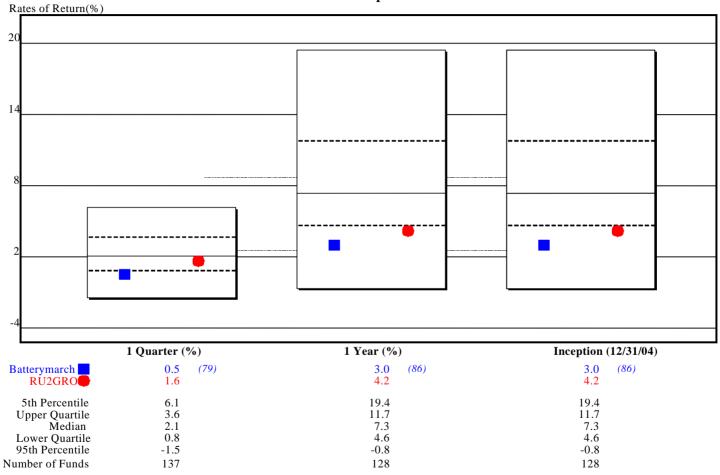
Byram Capital Management Organizational Issues

- Byram's asset growth and investment process over the more recent periods are of notable concern.
- Organizational infrastructure and investment process are viewed as simplistic relative to other institutionally-based money managers.

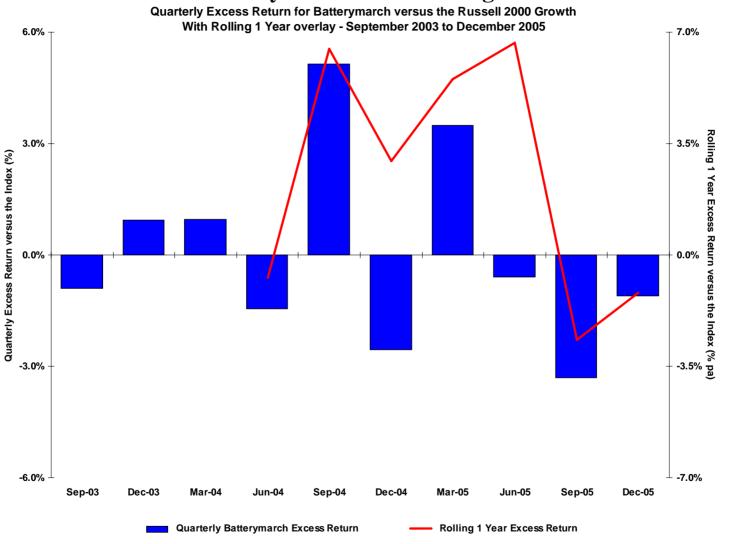
Assessment

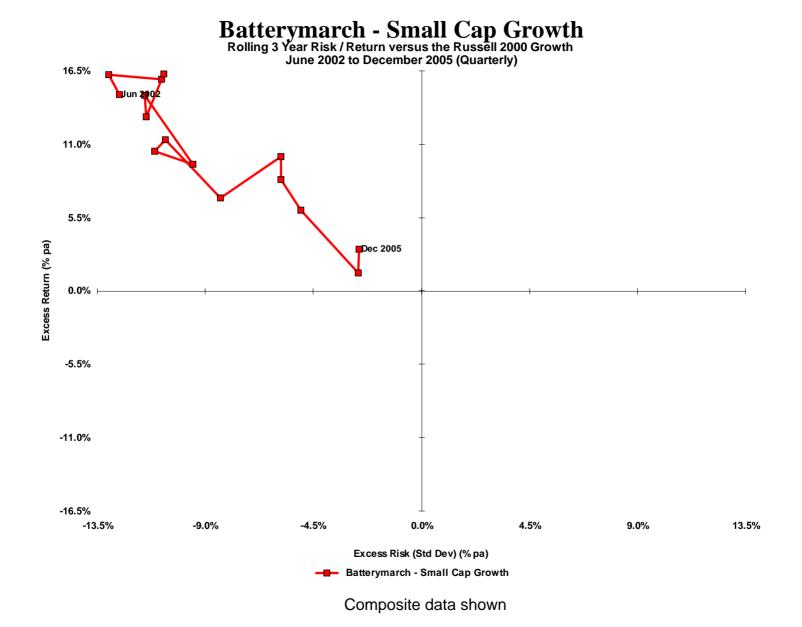
- Byram underperformed its benchmark and the universe median for all periods except 5 years. For 5 years, the portfolio was above the index and placed in the top decile of the universe. Since inception, Byram outperformed the index.
- Mercer rates this product B (average probability of outperformance).

Batterymarch Financial Mgmt
Comparison with the Mercer US Equity Small Cap Growth Universe
Performance before fees for periods ended December 2005

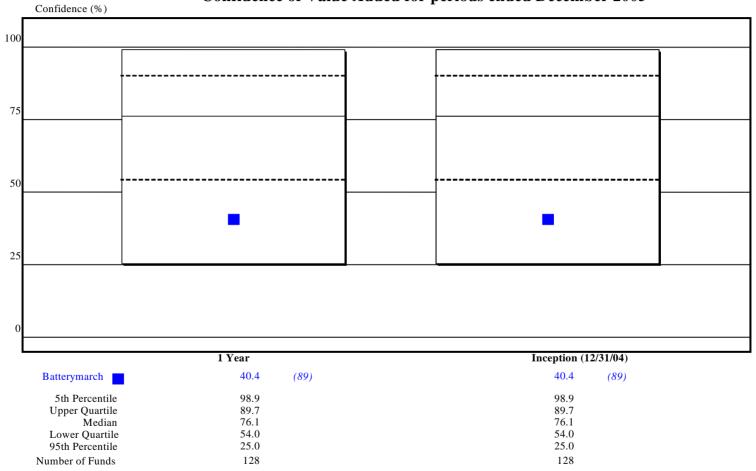


Batterymarch Financial Mgmt





Batterymarch Financial Mgmt
Comparison with the Mercer US Equity Small Cap Growth Universe
Confidence of Value Added for periods ended December 2005

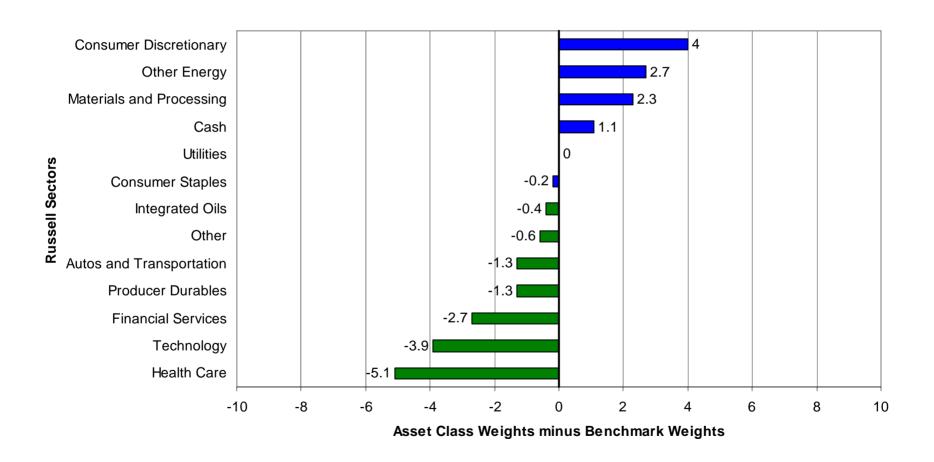


Batterymarch Financial Management Attribution Analysis

Period Ending December 31, 2005

	Quarter	1 Year	3 Years	5 Years	Inception
Stock Selection	-0.6%				-3.1%
Sector Selection	-0.2%				2.6%
Other	-0.1%				0.0%
Fees	-0.2%				-0.7%
Excess Return	-1.1%				-1.2%

Batterymarch Financial Management Style Analysis: Economic Sectors As of December 31, 2005



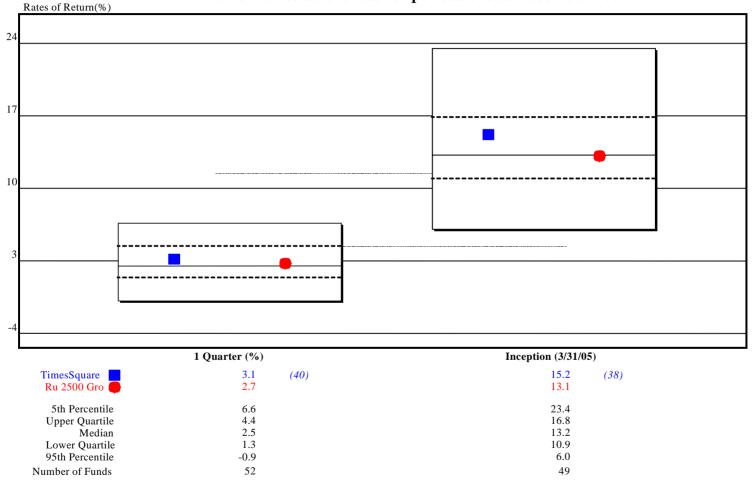
Batterymarch Financial Management Organizational Issues

• No organization concerns at this time.

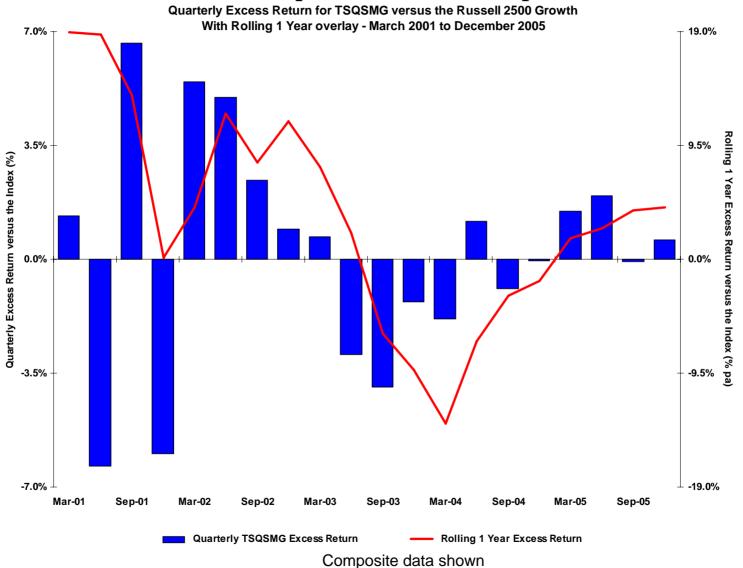
Assessment

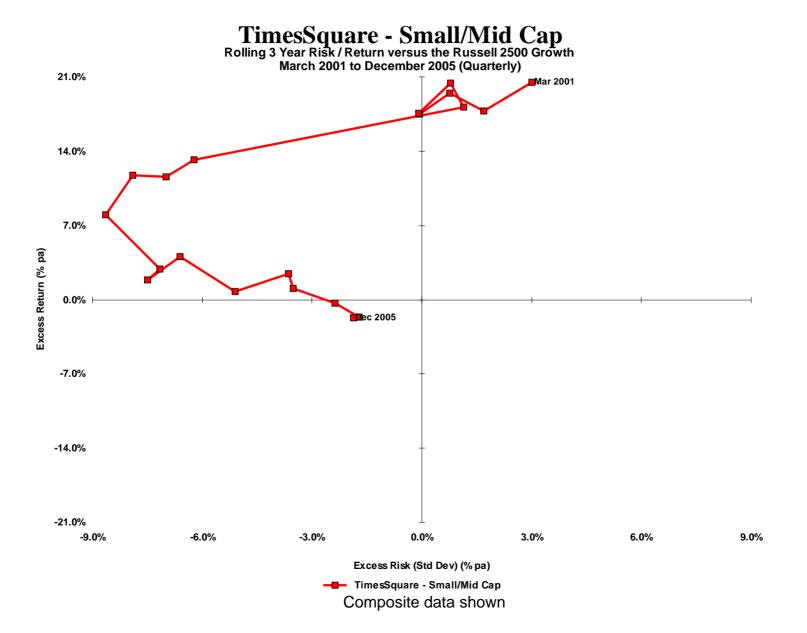
- For the recent quarter and 9 months, Batterymarch matched or underperformed the index and placed in the bottom quartile of the universe. Performance history is too short to make a recommendation at this time.
- Mercer rates this product A (above average probability of outperformance).

TimesSquare Capital Management
Comparison with the Mercer US Equity SMID Growth Universe
Performance before fees for periods ended December 2005



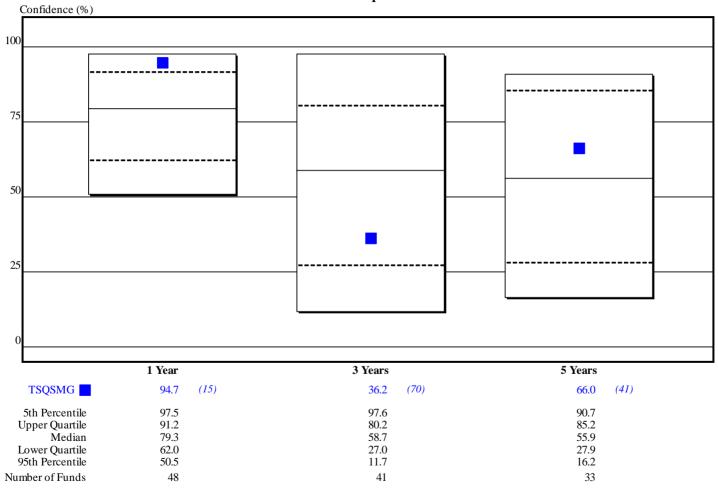
TimesSquare - Small/Mid Cap





TimesSquare - Small/Mid Cap

Comparison with the Mercer US Equity SMID Growth Universe Confidence of Value Added for periods ended December 2005



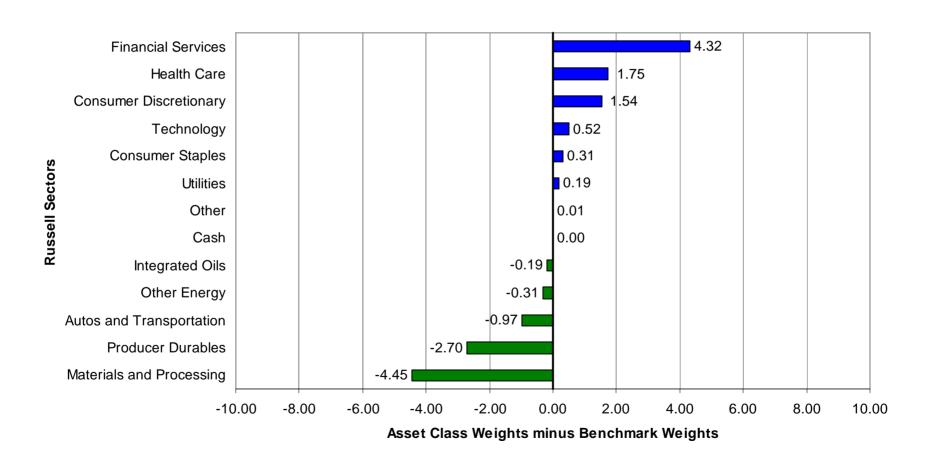
Composite data shown

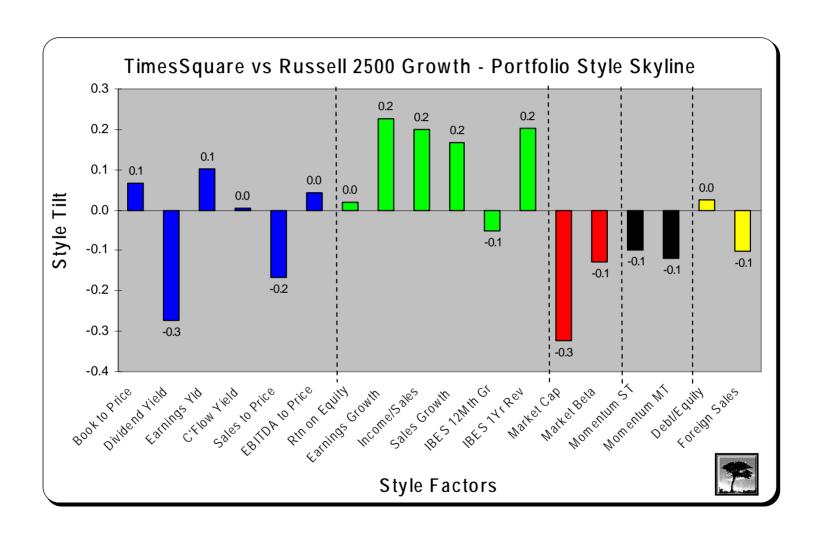
TimesSquare Capital Management Attribution Analysis

Period Ending December 31, 2005

	Quarter	1 Year	3 Years	5 Years	Inception
Stock Selection	0.6%				3.4%
Sector Selection	-0.1%				-1.0%
Other	0.1%				0.2%
Fees	-0.2%				-0.5%
Excess Return	0.4%				2.1%

TimesSquare Capital Management Style Analysis: Economic Sectors As of December 31, 2005





TimesSquare Capital Management Organizational Issues

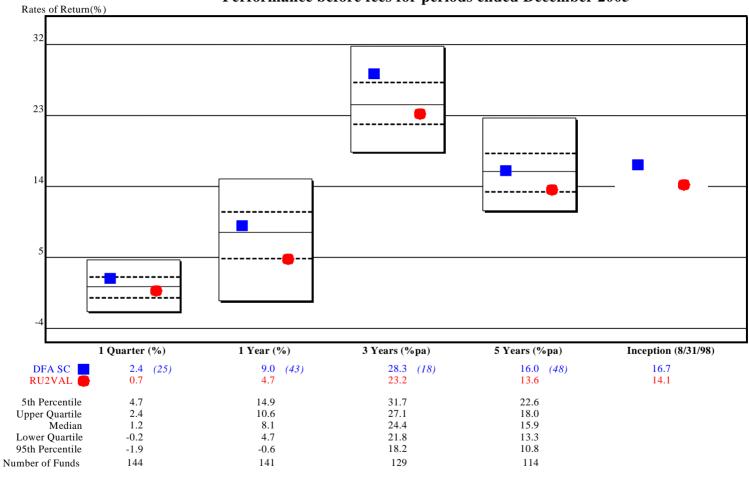
• No organization concerns at this time.

Assessment

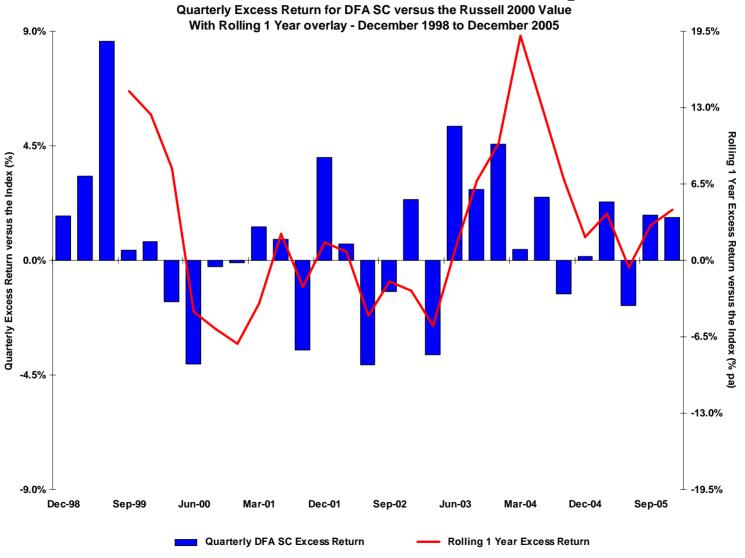
- TimesSquare outperformed its benchmarks for all periods evaluated.
- Mercer rates this product A (above average probability of outperformance).

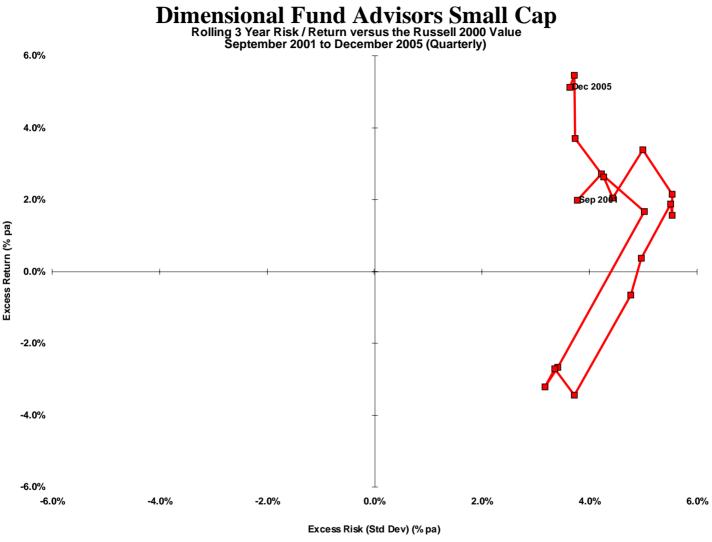
Dimensional Fund Advisors Small Cap

Comparison with the Mercer US Equity Small Cap Value Universe Performance before fees for periods ended December 2005



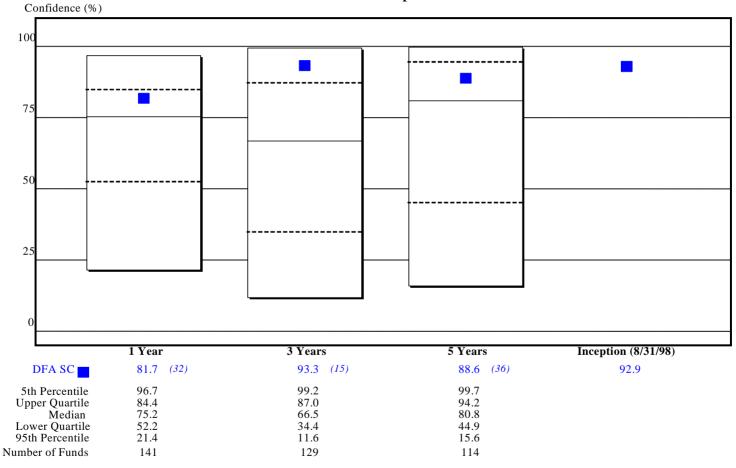
Dimensional Fund Advisors Small Cap





■ Dimensional Fund Advisors Small Cap

Dimensional Fund Advisors Small Cap Comparison with the Mercer US Equity Small Cap Value Universe Confidence of Value Added for periods ended December 2005



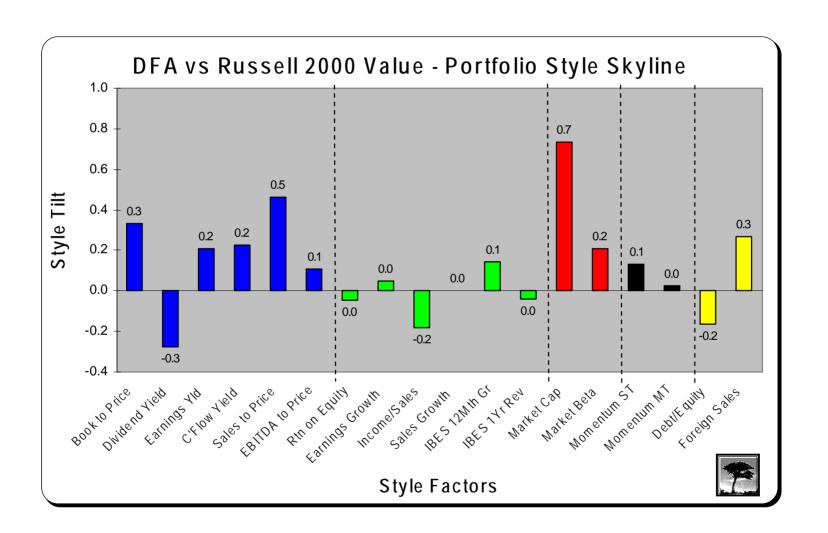
Dimensional Fund Advisors Attribution Analysis

Period Ending December 31, 2005

	Quarter	1 Year	3 Years	5 Years	Inception
Stock Selection	1.1%	3.8%	4.0%	3.0%	2.7%
Sector Selection	0.6%	0.9%	1.5%	-0.5%	0.0%
Other	0.1%	-0.2%	-0.2%	0.1%	0.1%
Fees	-0.1%	-0.2%	-0.2%	-0.2%	-0.2%
Excess Return	1.7%	4.3%	5.1%	2.4%	2.6%

Dimensional Fund Advisors Style Analysis: Economic Sectors As of December 31, 2005





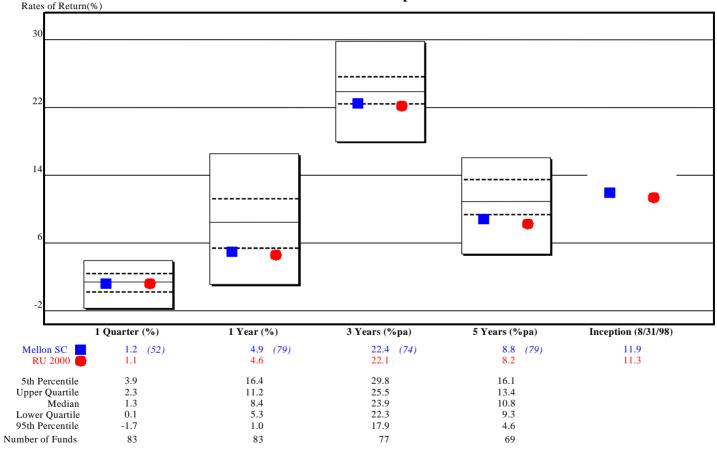
Dimensional Fund Advisors Organizational Issues

• On December 31, 2005, Jeanne and Rex Sinquefield, members of the Investment Committee, retired from Dimensional Fund Advisors. Stephen Clark was named chairman of the Investment Committee. Additionally, DFA is establishing 5 senior portfolio manager roles arranged by market and geography.

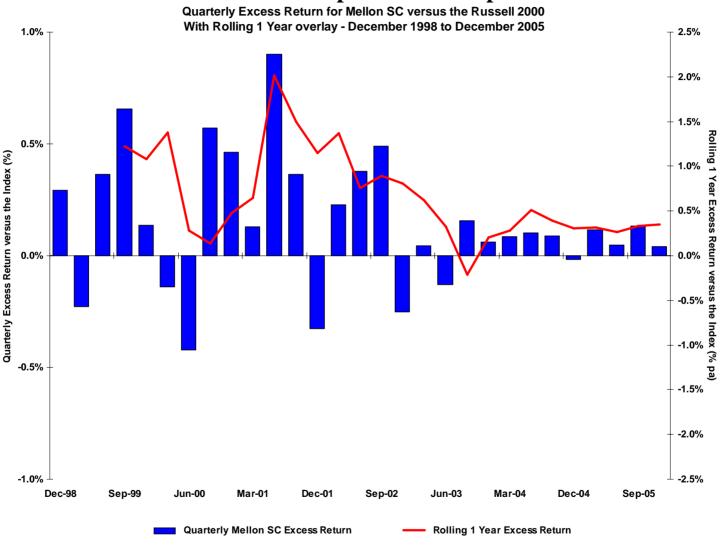
Assessment

- DFA outperformed its benchmarks for all periods evaluated.
- Mercer rates this product B (average probability of outperformance).

Mellon Capital Small Cap
Comparison with the Mercer US Equity Small Cap Core Universe
Performance before fees for periods ended December 2005



Mellon Capital Small Cap



Mellon Capital Management Organizational Issues

• No organization concerns at this time.

Assessment

- Mellon is tracking the Russell 2000 Index closely for all periods evaluated.
- Mercer does not rate this product.

Mercer Ratings Scale

A, A- = Above average probability of outperformance

B+, B, B- = Average probability of outperformance

C = Below average probability of outperformance

N = Not rated

What Do the Ratings Mean?

- Mercer's view on prospective future performance relative to benchmark over the medium term (3 to 5 yrs)
- Relative to risk of underperforming benchmark
- May or may not be in keeping with past performance